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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,453	03/06/2002	Jafar Hadian	3123-427 / 20011.05	8757

7590 05/05/2005

The Law Office of Steven G. Roeder  
5560 Chelsea Avenue  
La Jolla, CA 92037

EXAMINER
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DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,453

Applicant(s)

HADIAN ET AL.

Examiner

David D. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/15/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 98-138 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 98-138 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Prosecution Application***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 22, 2005 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 98-138 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boismier et al (US 6,501,625) in view of Fraunhofer-Ges (DE 3844669). Boismier et al shows in figure 4 a

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disk drive including a drive housing; a storage disk 160 coupled to the drive housing; and a head arm assembly 152 coupled to the drive housing. As shown in figure 1A, the head arm assembly 152 includes an adjuster 200 and a slider 156 coupled to the adjuster 200. The adjuster 200 includes a first layer 202 and an adjacent second layer 204, which is secured to the first layer 202. Boismier shows in figure 4 that the head arm assembly 152 includes a load beam, and the adjuster 200 is incorporated as part of the load beam. Boismier et al also shows in figure 1A a second adjuster 200 that adjusts the gram load that is applied to the slider 156, and wherein the head arm assembly 152 includes an arm beam 24, and the second adjuster 200 is incorporated as part of the arm beam 24. Boismier et al shows in figure 1A a thickness of the first layer 202 that is approximately the same as a thickness of the second layer 204.

Boismier et al is silent, however, the first layer having a first composition with a first material property, and the second layer having a second composition with a second material property that is different from the first material property with the adjuster applying a gram load to the slider that at least partially depends upon the temperature of the layers.

Boismier et al is also silent as to the first layer having a coefficient of thermal expansion that is at least approximately 25% greater than a coefficient of thermal expansion of the second layer, and the first layer having a modulus of elasticity that is different from a modulus of elasticity of the second layer. Additionally, Boismier et al is silent as to each layer being formed from a different composition of metal, and a thickness of the first layer being different from a thickness of the second layer.

Fraunhofer-Ges shows discloses a first layer having a first composition with a first material property, and a second layer having a second composition with a second material

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property that is different from the first material property. Fraunhofer-Ges also discloses an adjuster applying a gram load to the slider that at least partially depends upon the temperature of the layers (i.e. non-electrically actuated). Fraunhofer-Ges additionally discloses that the first layer has a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the first layer of Boismier et al having a first composition with a first material property, and the second layer of Boismier et al having a second composition with a second material property that is different from the first material property with the adjuster applying a gram load to the slider that at least partially depends upon the temperature of the layers as taught and suggested by Fraunhofer-Ges. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to having a first composition with a first material property, and the second layer having a second composition with a second material property that is different from the first material property because the two sets of layers are art-recognized equivalents and “the gram load of the head suspension assembly 152 can be changed real-time with changing drive conditions” (e.g. ambient temperature). See lines 60-63 of column 5 and lines 2-4 of column 6 of Boismier et al.

It also would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the first layer of Boismier with a coefficient of thermal expansion that is at least approximately 25% greater than a coefficient of thermal expansion of the second layer and having a modulus of elasticity that is different from a modulus of elasticity of the second layer or have each layer being formed from a different composition of metal, and a

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thickness of the first layer being different from a thickness of the second layer as suggested by Fraunhofer-Ges.

The rationale is as follows: the purpose of the layers is to adjust the gram load. The layers need not have a specific coefficient of expansion, a specific modulus of elasticity, a specific thickness or specific material such as metal to adjust the gram load. Realizing this one of ordinary skill in the art at the time the invention was made would have been motivated to provide a first layer having a coefficient of thermal expansion that is at least approximately 25% greater than a coefficient of thermal expansion of the second layer, a modulus of elasticity that is different from a modulus of elasticity of the second layer or have each layer being formed from a different composition of metal, and a thickness of the first layer being different from a thickness of the second layer, which is well within the purview of a skilled artisan and absent an unobvious result, so as to have optimal materials, readily available for the procurement process during manufacturing, for the best adjustment of the slider, for applying a gram load during the operation of the disk drive.

### ***Response to Arguments***

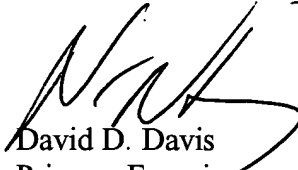
5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is (703) 308-1503. The examiner can normally be reached on Mon., Tues., Thurs. and Fri. between 7:30-6:00. The fax

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phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900. Any other inquiry should be directed to the customer service center whose telephone number is (703) 306-0377.



David D. Davis  
Primary Examiner  
Art Unit 2652

ddd  
April 29, 2005